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ABSTRACT

This master's thesis investigates the evaluative instruments currently available for measuring nonverbal behaviors in the classroom. Chapters discuss the following topics: classroom nonverbal communication, major and minor evaluative instruments, problems in current studies of nonverbal communication, and recommendations for further study of classroom nonverbal communication. An annotated bibliography and appendixes of nonverbal communication systems and instruments are included. (RL)

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NONVERBAL COMMUNICATION IN THE CLASSROOM:
REPORT, ANALYSIS, AND CRITIQUE OF EVALUATIVE INSTRUMENTS

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An abstract of a thesis submitted to the Faculty
of the University of Delaware in partial fulfillment of
the requirements for the degree of Master of Arts in
Communications.

June, 1977

Approved: _____

George A. Borden,
Professor in charge of thesis

GS 581859

This thesis investigates the evaluative instruments currently available for measuring classroom nonverbal behavior. It provides a useful reference tool for those embarking on research in classroom nonverbal communication by gathering together the most widely cited instruments for examination. These include the work of Galloway, Victoria, Love and Roderick, Cheffers, and Civikly. The instruments associated with the above studies are reproduced in appendix form while critical commentary on the strengths and weaknesses of the instruments are provided in chapter two. Accompanying methodology is likewise evaluated.

Other instruments, less frequently documented in scholarly journals but not necessarily less important, are studied in chapter three. Medley and Mitzel, Perkins, Schusler, Koch, Grant and Hennings, Parker and French develop nonverbal measures and/or theories of classroom nonverbal behavior study. They are needed here to "round out" the views presented by the more widely cited measures. When possible, the less documented measures are reproduced with brief analysis and evaluation.

Resting on this basis, recommendations are made for further study in classroom nonverbal communication. They are made with a view that incorporates the recent

research accomplished in nonverbal communication by Schefflen, Mehrabian, Birdwhistell, Hall and others.

Particularly emphasized are general needs for teacher education, in-service programs, and development of communication units for elementary and secondary students. A multi-dimensional instrument is anticipated by suggestions as to its component "sub-instruments," each designed to reflect an aspect of the classroom communication process. Methodological considerations appropriate to the multi-dimensional study of nonverbal behavior are offered. Included are the need for implementing processive and cluster measuring techniques; objective camera, video-taping, and video-replay techniques; incorporation of the variables of perception, inference, intentionality and self-esteem; establishment of valid and reliable observation and coding methods; computer analysis and computation of raw data. Studies are anticipated that will investigate the cultural, artifactual and environmental contexts as they influence nonverbal interaction in the classroom. Also future research points toward nonverbal/verbal contextual study. Study of the interrelationship of nonverbal behavior with: instructional modes, subject matter, teacher experience, "learning," retention, "attitude," physiological and psychological patterns is

necessary.

The proposed undertaking for future research is guided by the primary assumption of the thesis; that evaluation of classroom nonverbal communication must take into account somewhat "global" components of "message" and context, as well as measure specific observable non-idiosyncratic cues. This thesis is intended for use by those seeking: an overview of research for use in teacher education courses, a currently available instrument appropriate in scope and/or complexity to their particular needs, and further instrument development in classroom nonverbal research.

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With grateful acknowledgment for the guidance so generously given by the faculty of the Department of Communication of the University of Delaware. And with gratitude to George A. Borden who has skillfully and good-naturedly advised me.

To my husband and family a special tribute, for they have understood.

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CHAPTER I

CLASSROOM NONVERBAL COMMUNICATION

Nonverbal communication is a relatively neglected area in educational research, although many articles have been written about it in the field of anthropology, sociology, psychology, and psychiatry. This is probably because there is no system or language of nonverbal communication, and it is interpreted idiosyncratically rather than normatively.¹

In the above quote, an awareness of the impoverishment of methods available to evaluate classroom nonverbal behavior is expressed. Yet the richness of nonverbal experience in the classroom is evident. There, Galloway points out, "...all signs, actions and events have communicative consequences because such messages provide information."²

Nonverbal communication in the classroom needs attention now. That attention needs to be paid, at least partly, through the means of an understandable, practical nonverbal evaluative instrument.

But again and again, the question in the field is,

"At this time, where are we in the study of classroom nonverbal communication, specifically in the nonverbal communication of the teacher?" This question requires the examination of a rather awkward body of knowledge.

SCOPE AND PURPOSE

This thesis is purposed to be a "gathering-together" and "centering-in" on the research currently available in teacher nonverbal communication. The increase in the number of studies investigating techniques for quasi or fully systematic observations and analysis of teacher nonverbal behavior suggests a "pooling" is in order to lessen their unwieldiness. Used to its best advantage, the collecting and collating done here should make available a ready research tool, a "where-to-go," "what-to-get" document for those wishing to explore the field more deeply.

More than that, some perspective on "what's-useful-to-whom" (with the view tenaciously held that all studies are not meant to be all things to all teachers) will be maintained throughout.

In essence, the above will be accomplished with the following purposes:

1. to expose the reader to the range of teacher nonverbal communication by

highlighting the research conducted
in the field and in the laboratory,

2. to suggest to the reader the breadth of
background in nonverbal communication
studies-some sociological, some
anthropological, some psychological-
into which the educationally-oriented
studies are placed,
3. to analyze the viability of the
instruments developed for and used as
working tools in these studies in order
to advise the reader of their applicabil-
ity,
4. to supply copies of those instruments
along with relevant data in appendix
form,
5. to analyze the current status of the
research on teacher nonverbal communica-
tions and to make suggestions for
further research, including:
 - a) an investigation of the merits
and limitations of present
instruments for future
application,
 - b) the recommendation as to future
studies into problems not yet

solved or researched,

- c) recommendations as to the construction of a classroom non-verbal evaluative instrument accompanied by appropriate methodological considerations.

The thesis will cover intensely, but will not be limited to (others being included by reference, comparison and contrast) the following authors in teacher nonverbal communications:

Galloway

Victoria

Love-Roderick

Cheffers

Civikly

The work of Flanders, Withall, and Grant and Hennings will be included to the extent that the former five find their bases in the verbally-oriented studies of the latter three. Ample use will be made of work in teacher nonverbal communication, some complete with instruments, some not, done by the following: Breed, Schum, Strother, Medley and Mitzel, Goldberg, Goldberg and Mayerberg, Grant, Keith et al., Kleinfeld, Koch, Perkins, Schusler, and Woolfolk and Woolfolk.

Only those studies concerned with affective non-verbal communication acts that are observable by the

unaided eye and that occur within the context of the teaching/learning situation are included in this discussion. As fascinating as the unobservable facets of communication (e. g., extra sensory perception or the dilation of the pupil of the eye, etc.) are, they cannot at present serve as modes of teacher evaluation.

Moreover, paralinguistics, defined here as the study of the phenomena of voice (i. e., tone, accent, pitch, inflection, pause, etc.) and the verbal (i. e., words) will not be studied here EXCEPT as they intrude into several of the all-inclusive studies. The above procedure is necessary for the sake of manageability. It is done with full deference to the fact that the nonverbal and the verbal are interactive, mutually inclusive spectra. However, so many studies previously done deal exclusively with the verbal and, with the nonverbal now at "crisis," (i. e., having attributes resembling the Kuhnian pre-paradigmatic state³) it is deemed most important to deal with the subject as stated above.

The aforementioned studies of teacher nonverbal communication will be divided into those which are exclusively nonverbal on the one hand and into those which are "mixes" of verbal and nonverbal on the other hand. They will then be further subdivided on the basis

of the instrument used as "springboard." For example, those using the Flanders instrument as a starting point will be considered as "like" species and grouped together.

THEORETICAL ASSUMPTIONS

Such a critique is unquestionably bound and limited by a number of theoretical assumptions.

Some argue that behaviors "...occur in characteristic, standard configurations, whose common recognizability is the basis of their value in communications."⁴ That is the assumption here, despite the seemingly smaller and apparently less consistent data available for nonverbal investigation in comparison to that available for verbal studies. Along with this is the acceptance, for the purposes of this thesis of its corollary—that nonverbal behaviors are measurable and codifiable.

Some circles contend that the verbal may be observed with more reliability than the nonverbal. Here, the assumption is that the verbal can perhaps be observed with more ease, but not necessarily with more reliability. In this work, there is a concern that the field "let go" of the dictionary of gesture-compiling, that it widen the stimulus-response limitations of the behaviorist, and that it replace anecdotal and casual descriptive (that is to say, subjective) observations. In their

place is the researcher's concern for a rigorous methodology and a base of empirical research. The studies are further assumed to rest in a comprehensive, contextual, realistic, holistic, and global setting.

In addition, there are as yet unresolved concerns with: the proper place of behavior study within culture (some cues are apparently culturally "set,"⁵ others are "pan-cultural "⁶), the question of instinctual versus learned behaviors,⁷ the "scientific" role of the observer (whether he/she be naive, trained or participant-observer). Such concerns are answered only tentatively or cautiously here.

At the same time, there is a rebellion herein (as supported by the "current research" section) against the still-made assertions by the verbally-oriented, that the verbal always dwarfs the nonverbal in both occurrence and meaning, that the verbal constitutes a more advanced style of meaning than the nonverbal, that the nonverbal is composed of so many complex cues that it cannot possibly be measured, that the nonverbal is so highly idiosyncratic that it cannot be codified, and that all nonverbal gestures are readily recognizable in the lower animals and so are easily reducible to the level of pure instinct.

RATIONALE

This project has merit in that, although reams of material are presented to student-teachers in our institutions as well as to our practicing teachers in the classroom by way of "in-service" meetings, most of it regards verbal presentation. There is little, and in the case of some institutions, no preparation of either student-teacher or teacher in nonverbal behavior, either in the recognition of cues in others (presumably students) or in the development of an effective vehicle for their own nonverbal behavior. In fact, the researcher was able to find NO current college catalog stating the requirement of nonverbal training for prospective teachers.

It is also timely to the teaching profession that such "drawing-together-with-analysis" be done. With the advent of video-tape evaluation, and now of video-tape marketing of teachers*, it is not only in the interest of bettering the students' educative and personal experience, but also in the interest of professional longevity that teachers, particularly when faced by the stark days of tenure-seeking, adopt a workable model of nonverbal behavior.

In addition, the study may create some awareness, that with six or more hours a day spent in the classroom

*As of September, 1977; Trenton, N.J. school officials will view video-tape teacher "performances" before hiring applicants.

during thirteen of the formative years of an individual's life and with (though estimates differ) a bulk of the "message" sent nonverbally, there is immense need to update resources, better experimentation, and to investigate assumptions. The communications field may well charge itself with service to the scholastic community at large and, more than that, with acting as "gatekeeper" to the body of research generated. When a teacher pleads, "Why did they ACT that way, when I SAID everything right??" is the communications expert to respond in rather vague Juilius Fast terms or in precise Mehrabian terms?

How are teachers, unless made aware, to know what messages they are sending nonverbally? How are they to recognize on what verbal and nonverbal bases students tend to determine their cultural and socio-economic "status," their disciplinary preferences, their "liking" or "disliking," formality or informality, autocraticness or democraticness?

CURRENT RESEARCH

Research completed by others in the area brings to bear the resolvability of many of the issues and further emphasizes the general resistance to or the lack of sophistication about the nonverbal on the part of educators. First, however, an apology for reporting such research in

a brief and "glossing" manner must be made. Lifting a study from its proper context necessarily "bends" and "distorts" it to some degree. Nevertheless, there has been found to be a high level of intercongruency among studies, with one work generally supportive of another's findings as Mehrabian and Friar point out.⁸ Many of the results are, in fact, redundant.

That the educational community itself is lacking in sophistication about the research on nonverbal behavior is a prime point included by many writers. Victoria finds that "The qualitative aspects of life [which he contends are relayed nonverbally] in the school environment are often perceived by students and teachers alike as unsupportive rather than supportive"⁹ and further posits that "...the process of communication determines the process of education."¹⁰ Galloway places responsibility directly at the "cues" of the teacher, stating, "Teachers must learn what their expression equipment means to them and to others. I see nonverbal behaviors and expressions as true extensions of the person,"¹¹ and Knapp sees implicit in the nonverbal model an interaction between source and receiver, offering:

...the amount of sensitivity to
nonverbal cues is related directly
to the amount of interpersonal

feedback a person receives and his receptivity and sensitivity to that feedback. The obvious implication of this is that the classroom situation can provide an atmosphere in which there is a free flow of feedback and interpersonal "coaching."¹²

Certainly, Victoria, Cheffers, Galloway, Civikly, Goldberg, Knapp, Grant and Hennings, Love and Roderick, and Woolfolk and Woolfolk agree; the classroom is territory open for nonverbal "discovery."

Despite the fact that "Nonverbal communication, in the form of gestures, positions and stances is [acknowledged by many to be] an inseparable part of the teaching process,"¹³ one finds sparse investigation into this area as compared with the verbal. Victoria reports that research has been primarily conducted regarding teachers' verbal communication with Simon and Boyer finding that of twenty-six instruments considered, twenty-five deal with the verbal mode while only seven provide for observation of the nonverbal mode.¹⁴ Grant and Hennings reiterate, "...when we look at descriptions of teaching, we find little that indicates the role played by nonverbal teacher activity."¹⁵ Koch quotes Halpin as stating that training programs for teachers "...ignore the entire range of nonverbal communication..."¹⁶

This lack of teacher preparation and low level

of awareness is somewhat ironic since leaders in the field have shown, as Knapp points out "...we can develop non-verbal skills."¹⁷ That is, training in nonverbal skills results in positive improvement in nonverbal awareness. Schum found that his experimental group, after training in nonverbal skills and self-analysis of teaching on video-tape, increased in positiveness of teaching style and in offering encouraging responses while lessening restricting behaviors.¹⁸ Strother et al., in an experiment in which none of the hypotheses was confirmed, attempted to correlate instruction in nonverbal communication for both student and teacher with student achievement and teacher competency. They find experimental methodology at fault for lack of confirmation while finding other non-measured positive outcomes of the unit of study.¹⁹

Victoria argues, "Cognizance by teachers of both the visual and verbal aspects of communication behavior may enhance their ability to more effectively relate to all pupils in teaching-learning situations."²⁰ Part of this cognizance may simply be achieved by raising the level of teacher awareness. "It is evident...that student-teachers [and experienced teachers as well] need to be aware of both their verbal and nonverbal communication behavior."²¹ Nonverbal cues may either be

"intentional" or "unintentional" according to Grant and Hennings.²² The evident lack of awareness may be corrected by efficient means such as those suggested by French.²³ Additional instruction, beyond the awareness level, would include training in the recognition of behaviors, adoption of models, and self-evaluation. Such training has been proved effective. Kehoe reports on the positive results of teaching nonverbal skills in general,²⁴ while Rosenthal et al., find that "women and girls do better than men and boys, although males in mental health and education do well enough to score like women."²⁵ Rosenthal et al. owe the latter finding to the increased affective training of men in such fields. But important too is the finding that training of males tends to even out male/female scores.²⁶ Moreover, democratic teachers score higher in nonverbal sensitivity than do autocratic teachers, an indication that personality interacts with nonverbal sensitivity scores. The addition of democratic principles training may cause nonverbal sensitivity scores to increase.²⁷

Morganstern, basing his arguments on Gibson, Allen, and Ryan, calls for teacher training in nonverbal communication and for the development of effective teacher nonverbal models to that end. In doing so, he assumes that nonverbal skills are "trainable."²⁸ All in all, recent

studies resist, as Leathers does, the definition of the nonverbal as wholly instinctual.²⁹

Beyond this, there is much assertion that the nonverbal realm is a more reliable and qualitative index and expression than the verbal, that the nonverbal is more influential and more efficient in meaning-production, and that it is more believable and more direct. As Leathers notes:

First, nonverbal, not verbal factors are the major determinants of meaning in the interpersonal context...^{*30}
 Second, feelings and emotions are more accurately exchanged by nonverbal than verbal means...³¹
 Third, the nonverbal portion of communication conveys meanings and intentions that are relatively free of deception, distortion, and confusion...³²
 Fourth, nonverbal cues serve a meta-communicative function that is indispensable in attaining high quality communication...³³
 Fifth, nonverbal cues represent a much more efficient means of communicating than verbal cues...^{**34}
 Sixth, nonverbal cues represent the most suitable vehicle for suggestion.³⁶

The implications to the classroom here are obvious. If so much of the content of communication is so important

* According to Mehrabian, from 93% up, to Birdwhistell, at least 30-35%.

** According to Victoria, nonverbal behaviors permit "...instantaneous perception of meaning within the context of interpersonal relations."³⁵

and is conveyed by the nonverbal mode, why is it that studies into teacher nonverbal behavior remain "stalled" at a pre-paradigmatic state and are not being incorporated into the body of teacher training?

Continuing even further, Victoria finds nonverbal phenomena "...qualitatively predominant aspects of interpersonal relationships" that "...often are the most lingering retention of the event."³⁷ (emphases mine)

It would seem that quite apart from their sheer bulk, the nonverbal phenomena play THE MOST influential role in teaching/learning situations. Too numerous to cite here are the many examples of teacher behavior noted in the literature later recalled by observers, whether acting as trained judges, or as students, that rest upon behavior evidenced rather than upon words spoken by the teacher.

In fact, when the nonverbal is in contradiction to the verbal, the nonverbal is "believed" by the student according to the work of Mehrabian³⁸ and Galloway³⁹ who goes so far as to say:

For, indeed, a pupil who "sees" and "hears" kinesthetically may record a message in his mind which contradicts the verbal report rendered by the teacher.⁴⁰

Piled on top of that quantitative and qualitative powering by the nonverbal are such confusing results as follows:

Keith et al. point to the nonverbal "habits" of teachers, finding that while teacher-interns' approval tends to be passively, nonverbally expressed, their disapproval tends to be explicitly, verbally expressed;⁴¹ Woolfolk and Woolfolk point to the inferences of students, claiming, that when children are put in an ambiguous situation, they "assume" the worst.⁴² How, then, is the teacher, naive to nonverbal communications, to deal effectively with such phenomena in the classroom?

In fact, the reader of nonverbal research becomes "bogged down" in what looks like the "no-win-situation" of a teacher untutored as to the complexities of the field. On the one hand, "double-edged" or "double-bind" messages (i. e., incongruencies arising from inconsistencies within or between channels) appear to lead to psychological disturbances. Some documentation as to the cause-effect relationship of "double-bind" messages to schizophrenia exists.⁴³ On the other hand, the effect of "redundancy" (i. e., agreement of the repetition of a message within or between channels) tends to reinforce an understanding, particularly if negative. Mehrabian and Ferris use the following exemplar, "Pushing a child away while turning away from him is assumed to communicate a more negative attitude toward the child than only pushing him away or only turning away from him."⁴⁴

Prejudging is another factor that no doubt complicates classroom messages. Saral finds prejudging linked to the maintenance of the same bias and reports "...equivocal signs will be distorted in such a manner as to confirm the first impression."⁴⁵

It must further be assumed that teaching/learning occurs within a cultural context equally complex in makeup. The apparent ease of cross-cultural nonverbal understanding is bolstered by the work of Saral,⁴⁶ Ekman,⁴⁷ and Boucher and Ekman⁴⁸ who find pan-cultural generality of facial expression in their studies. These include at least six emotions, even to the pre-literate isolated peoples of New Guinea.⁴⁹ Moreover, personal warmth, though defined in somewhat diverse manners, has been found to have a positive effect on scores on intelligence test performance of both Eskimo and Indian adolescents just as it had previously been found in the case of American adolescents.⁵⁰ Parenthetically, it may be noted that experimenter warmth correlates positively with subject verbalization.⁵¹

But subtleties of cultural understanding must at some point intrude into the classroom. What denotes positiveness in one culture may not in another; what denotes warmth in one culture may be suspect in another—witness the use of diverse "warmth" indicators in the

Kleinfeld study cited above. Saral attempts to clear the haze by affirming, "It is the referential (denotative) meanings of facial expression that are more subject to cultural variations depending upon what emotions are appropriate or permissible in various social situations."⁵²

On the other hand, not all cultural variations are dismissed with such ease. They pervade the research literature. Women's nonverbal behavior tends to be more relaxed and more submissive in style than the nonverbal behavior of men, according to Saine.⁵³ Of what import is such a finding to teacher nonverbal communication? (in structured environments? in "free play?" in disciplinary settings? on cafeteria duty?) Goldberg and Mayerberg find even more cultural difference. Black second graders perceive a neutral (female, white) teacher in the most positive way whereas white second graders and sixth graders of both races evaluate the positive (female, white) teacher in the most positive way.⁵⁴ In what way does the educational community view that black second grader as a result of his/her perception of neutrality as positive? In what ways does the second grade teacher modify his/her behavior in the presence of black students?

In addition, Duke tells us that in disciplinary situations, the direct gaze of the North American teacher may "put off" the Puerto Rican child whose "downcast"

eyes in return are signals of irresponsibility to the North American teacher.⁵⁵ Also, there is general agreement among researchers in the field that students from lower socio-economic groups, from racial minorities or from foreign language-speaking homes tend to rely more heavily (for the message) on the nonverbal communication of teachers than do the verbal-relying students from higher socio-economic, racial majority, English-speaking backgrounds.⁵⁶

Yet, with the exception of Grant and Hennings, who refuse to label any nonverbal behavior either as positive or negative, there is an assumption in the studies of teacher nonverbal communication, as evidenced in the construction of the instruments both in the field and in the laboratory, that particular teacher nonverbal behaviors constitute positives; other nonverbal behaviors wear negative labels. In several studies, a third set of behaviors are considered neutral or "pro forma." Moreover, this assumption is extended in that such positive/negative/neutral nonverbal behaviors are assumed to be wholly congruent, even in the affect condition, with positive/negative/neutral learning.

These assumptions are based at least to some degree on results obtained in research completed both in education and in other fields. However, nonverbal codes, as currently reported, are far from clear or finite. It

must be noted that segmentation of theories and models prevents easy systematization such as that reported above. Theorists and experimenters do not wholly agree regarding the nature of nonverbal symbolic activity or even that there is or is not nonverbal symbolic activity.⁵⁷ This may be regarded as an advantage by one such as Kaplan who finds that because the nonverbal media are not "structurized," they are not therefore constrained by a system of symbols impoverished in meaning.⁵⁸

Some educators, like Grant, have followed the lead of Hall, Scherer and Birdwhistell, finding a code for all nonverbal behaviors relevant to the teacher. Their rationale, it seems, is based on such reasoning as follows:

The measurement of nonverbal meaning takes a number of steps. The first involves identification of nonverbal modalities. For each modality an exhaustive list of variations (or forms) has to be constructed. Furthermore, an exhaustive list of all human non verbal modalities must be attempted.⁵⁹

Such methodology, commendable in its concern for objectivity was used by Grant in a nursery school setting. The result: a breaking of every motion into subdivisions. Eyelid movement, for example, was found to be made up of seven separate motions.⁶⁰

Such infinitesimality is not useful either to the purposes of our discussion here or to the practical needs

of the classroom teacher. Rather, it is necessary that one be mindful of the research basic to those studies which "glue," with some reason, positive, negative and neutral identifications on nonverbal behaviors. (See Leathers, Appendix A for a chart of current recognized systems and their general area of impact.)

Some generally recognized positive/negative/neutral nonverbal behavior research findings do exist. "Head cues typically communicate affect quality..."⁶¹ and carry information about emotion.⁶² When the head is leaning forward or is more "immediate," the perceiver infers a more positive attitude on the part of the other.⁶³ Eye contact, excepting the prolonged "gaze" or "stare" (often perceived as a sign of hostility or aggressiveness) is found to be contributory to a positive and extroverted attitude.⁶⁴

Seals and Kaufman's research on teachers using "still" and "active" nonverbal conditions indicates that instructors who are nonverbally expressive and "active" tend to elicit more positive attitudes than those who are "still." They relate these results, in turn, to the work of Mehrabian and Williams. Correlation is positive "...between the degree of liking and the quantity of intended persuasiveness on the part of the sender."⁶⁵ Seals and Kaufman conclude, "For instructors,

this can mean that the more one is involved nonverbally in teaching, the greater the rewards in terms of student attitudes toward learning."⁶⁶

In a field setting, Breed and Colaiuta found that "visual contact with the instructor increases attentiveness, which in turn makes for better grades."⁶⁷ Breed also experimented with four degrees of eye contact as variables, finding that the lecturer's gaze (as opposed to excluded gaze or no gaze) positively affected student perception and retention of subject matter.⁶⁸

Open gestures⁶⁹ and relaxation⁷⁰ tend to elicit positive attitudes in the perceiver while muscular tenseness, increased hand and finger movement indicate anxiety, a negatively-perceived emotion.

Body cues and posture tend to reveal information regarding intensity, according to Mehrabian⁷¹ and Ekman⁷² and may be regarded as symptomatic of "inner states" according to Victoria.⁷³ A forward lean is often understood as positive, an indication of liking.⁷⁴

Those who like and are liked are found by Mehrabian to be close proxemically, (Problems occur when the feelings or the proxemics are not mutual!) while those who dislike and are disliked tend to be proxemically distant.⁷⁵ In harmonious relationships,

Beier found close-sitting and touching of others; while in conflicting relationships, he found distant-sitting and touching of self.⁷⁶ Sherman found that greater listening comprehension is gained when closer proximity between student and teacher is maintained.⁷⁷ Kleck found those students sitting closest to the teacher were the most compliant.⁷⁸ Sommer's study on classroom seating arrangements indicates that teachers working in conventional row seating environments interact with a smaller range of student than those teaching in classrooms less traditionally arranged. Seminar arrangements tend to reduce participation by those on either side of the instructor (perhaps due to loss of eye contact).⁷⁹

Regardless of the rather mixed findings above, the instruments now available for use for the observation of teacher nonverbal behavior tend to polarize positive/negative behaviors, often with a cursory seven or ten categories that are couched in nonspecific terms. None of the instruments and few of the studies explain how such positives and negatives interact with the teaching/learning process.

QUESTIONS

On the basis of the previous discussion and summation of research and within the purposes and

theoretical assumptions of this thesis, the following questions arise for consideration:

What are the methods currently available for observing and/or evaluating teacher nonverbal behavior?

In what way/ways do underlying assumptions and theoretical bases of these nonverbal studies yield strengths and weaknesses?

What, if any, are the relevant and/or practical uses of each of these instruments? What, if any, are the drawbacks in their use?

In what ways may these instruments and/or their methodologies be improved?

What development of and/or refinement in an instrument or model is possible at this time?

In what direction should future research be guided? What new research on these instruments is necessary and/or feasible?

How may knowledge resultant from previous, current, and future nonverbal research be made available and useful to teachers

in the elementary, secondary, and college classrooms and to teachers in training?

What are the financial, legal, and ethical considerations associated with the application of such instruments and studies?

CHAPTER II

MAJOR INSTRUMENTS

In order to evaluate the strengths and weaknesses of the instruments currently available in the field of teacher nonverbal behavior, it is first necessary to treat the background from which such instruments arose. Several instruments, called interaction analysis of verbal behavior tools, came into use in the 1950's and 1960's. The most popular of these were the Withall system that measured seven categories of teacher verbal behavior and the Flanders system of interaction analysis with ten categories. The Flanders system, presumably a means of objectively quantifying verbal behavior in the classroom, may be used in "live" situations by an observer or in self-evaluative situations. Tape or cassette recordings are commonly used in the latter instance.

Flanders breaks verbal behavior into ten categories; each of these in turn fits under the general headings of "Teacher talk" (either direct or indirect influence) or "Student talk." (See Appendix B for Summary of Categories for Interaction Analysis) Every

three seconds, in steady tempo, the evaluator jots down the number of the interaction just observed. If small group, silent work, play, or seminar discussion takes place, it is necessary for the evaluator to cease observation until "recordable" activities resume.

After observation is completed, the sequence of recorded categories may be summarized in the form of a ten-by-ten matrix, with percentages of teacher talk to student talk and of direct teacher influence to indirect teacher influence then readily available.

Still in use, the Flanders system tends to have the following inaccuracies: three second time intervals do not allow for the variability of duration of human behavior; the ten categories do not cover the richness and nuance of all verbal behaviors; judges may be trained in or naive to the instrument's use and thus capable of differing judgments; judgment of behaviors according to the ten categories depends at least in part on the subjective faculties; skipping of "unrecordable" classroom segments skews the results obtainable; one-channel dynamics only are recordable; meta-communicative, paralinguistic, proxemic and kinesic behavior are not recordable.

While the former five intrinsic inaccuracies of

the Flanders system have been largely neglected, the latter two, dealing with the nonverbal dynamics of the classroom, have attracted criticism and have led to innovation. Specific development has come in the drawing up of Flanders-like systems for the categorization of nonverbal classroom behavior.

In responding to the overwhelming influence of the verbal "message" in educational research, Galloway states,

Nonverbal behaviors...were assumed to be consistent with verbal behaviors, and nonverbal interaction was believed to correspond with verbal interaction. In other words, a valid sampling of verbal behavior was presumed to be an adequate sampling of nonverbal influence. Such an assumption had little or no support from behavioral scientists in anthropology, and psychology, but educators found it useful.⁸⁰

Of course, Galloway's opinion is: "...nonverbal messages may be more significant to pupils than teacher verbalizations when they (sic, pupils) attempt to ascertain the teacher's true feelings and attitudes toward them."⁸¹ The pupil, moreover, "...continually checks the consistency and congruence between the nonverbal cues and verbal remarks expressed by the teacher."⁸² "...Overlooked, perhaps is the inference that pupils may learn more about feelings and attitudes from nonverbal behavior than they do from verbal language."⁸³ (capitalization mine)

Concerns such as these expressed by Galloway led him to construct an early nonverbal evaluative instrument. It may be used alone or in combination with the Flanders scale (as reported in Appendices F and G).

GALLOWAY-1962

"OBSERVATIONAL PROCEDURES FOR DETERMINING TEACHER NONVERBAL COMMUNICATION"

Fully aware of much of the "challenge of nonverbal research," Galloway lists the following problems: the difficulty of devising units of measurability for nonverbal behavior, the "elusiveless" and "ephemerality" of nonverbal behaviors, the laboriousness and complexity of compiling data, the difficulty of reaching adequate measures of reliability and validity, the "corrupting influence of cultural difference."⁸⁴ Even if proper data collection, analyzation and codification could be attained, Galloway nevertheless asserts that he does not want to draw up formulae for teacher mimicry or plastic models of teacher nonverbal behavior. Yet teachers, newly aware of the nonverbal field, want to know a precise routine of the correct behaviors. With a dynamic though difficult-to-implement perspective, Galloway reveals:

Exact prescriptions of what every teacher should do seems (sic, seem) too static and stereotyped. I don't wish to create artificial manners and maneuvers. My view minimizes technical training and maximizes self-

discovery and self-development.

If possible, I would want every teacher and adult to be a student of his own nonverbal activity...⁸⁵

Some of the above has been stated since his thesis, but his writing, even in his thesis, conveys a concern for the complexity of nonverbal research and for the difficulty of instrument development. The Galloway instrument is, in fact, not alone, but joined to a descriptive observational procedure (that is completed by trained judges and educational "experts") and a student-completed adjectival continuum. (See Appendices C, D, and E respectively.) At no time does Galloway suggest anything but the interdependability of the descriptive and the category methods.

In Galloway's work, nonverbal behavior is defined as having three facets: facial expression, gestures and body movement, and vocal intonation and inflection. Although this definition is broadened implicitly in later writings to include "space," "travel," "time," and "dress," (thus incorporating the proxemic and artifactual systems) it is originally limited to the above three facets as stated in the "Observational Procedures" set forth in 1962.

Here, then is a limitation of definition that is not made more clear or more precise by the thesis.

Gestures and body movements are lumped together without any distinguishing characteristics, except fleeting references to research completed by anthropologists, sociologists, and psychologists. Cues are neither made particular nor objectively described in any of the three evaluative procedures. For example, cues are subjectively and inferentially treated:

He maintains eye contact, indicates patience and attention, suggests a readiness to listen or an attempt at trying to understand. A pose or stance of alertness, readiness, or willingness to have pupils talk.⁸⁶

While there is obvious concern for useability and practicality of the categories, and of the instructions for the judges who are to write observation episodes, it is difficult indeed to determine how either the widely and subjectively defined categories or the immensity of description to be achieved by the observers agrees with current research such as that of Mehrabian and Birdwhistell. Such specifics as "forward lean" of the body or "relaxation" are not even touched on here.

Moreover, the instrument, like the Flanders system before it, categorizes teacher behavior on the basis of "encouraging" or "inhibiting" (with the "pro forma" category as neutral). Such a dichotomy reflects neither the nuance of nonverbal behavior/nor the shading of meaning available in cues. To reduce most behavior to

the terms of "encouraging" or "inhibiting" is to limit the potentiality of nonverbal expression. For example, incongruency between vocalic and kinesic channels or between kinesic and proxemic channels are not capable of being recorded in this system. Thus, overall congruency of the nonverbal system is wrongly assumed. Even so, incongruency between the verbal and nonverbal can be reflected when Galloway's and Flanders' categories are used simultaneously.

Also, no real correlation of the "encouraging" cues with positive learning or of the "inhibiting" cues with negative learning is accomplished by Galloway. Other researchers such as Breed, Kleinfeld, and Sherman do accomplish similar correlations later.

Some problems are evident in the matter of observer training, both with Group "A," the categorizing judges (previously mentioned on page 30), and Group "B," the episodal writers, who are instructed to make "inferences" regarding "nuances" and "inflections."⁸⁷ Group "B" judges labored under cumbersome instructions to:

1. At the beginning of each observation, describe the total situation that directly confronts the observer.
2. Report the contextual situation of the teacher's behavior.
3. Continue to focus upon the behavior of the teacher.
4. Describe the "how" of everything the

- teacher does.
5. Describe the "how" of everything done by any pupil who communicates with the teacher.
 6. Describe communicative acts as fully as possible.
 7. Put inferences in parentheses, not in descriptions.
 8. Write (sic, describe) an executed behavior in a simple sentence, not in an elaborate, complex sentence. ⁸⁸

Even if taken in shorthand, such a descriptive observation would be a large order!

Nevertheless, reliability is established for Group "A" judges who were rehearsed in the categories, who were checked for interjudge consistency, and who participated during the study in making categories more meaningful.⁸⁹ Problems in category definition arose especially in regard to behaviors termed "idiosyncratic and unique to the teacher."⁹⁰

Six teachers in contextual classroom settings are observed by individuals from the teams alternately coding or writing from behind the one-way screen of an observational booth.⁹¹ Such methodology presumably cuts down the effects of observer intrusion into classroom behavior. In later writings, with the common availability of video tape for research, Galloway recommends its use.⁹² The length of observation was standardized; however, no unit for individual categorizing was prescribed. "Natural segments" of unfolding events were to be used

as divisions by Team "A." Again, the contamination of inference into experimental objectivity regarding the occurrence of those segments and the lack of standardized instruction present problems.

Although observation was carried on in a "contextual" setting, and although Galloway pays lip service to cultural, racial, and socio-economic differences, neither the categories, the specifics for observational episode writing, nor the overall instructions take such differences into account. The artifactual system and the environment (whether constant or varying from observation to observation) are not considered by the categories.

It is, then, with the foregoing problems, that Galloway's results are not surprising. His data did not overwhelmingly favor any one of the three methods-category observations, descriptive episodes or expert judgments-though the first two appeared promising.

The writer and reader are left, consequently, with a rather inconclusive result: the immense difficulty of devising observational procedures and instruments for evaluating teacher nonverbal communication. Galloway does not suggest that his categories for evaluating teacher nonverbal behavior be used by themselves as an "end-all" or an authoritative measurement. Paramount

to his outlook is the long difficult road toward the development of viable research in the area.

VICTORIA-1970

"OBSERVATIONAL PROCEDURES FOR THE IDENTIFICATION OF NONVERBAL BEHAVIOR OF STUDENT-TEACHERS OF ART"

Victoria's development of observational procedures for teacher nonverbal communication are grounded on a wide base: his own experience as an art teacher, his thorough familiarity with the Withall and Flanders scales and his knowledge of Galloway's expanded instrument.

Resisting the labelling of schooling as a wholly cognitive experience, Victoria relies on the development of "affective education" and looks toward the "...creative use of emotions, feelings and ideas."⁹³ He goes on to assume that communication (both verbal and nonverbal) "determines" the process of education. All of this is bolstered by the argument (as supported by the work of Leathers) that the nonverbal, which Victoria never defines, expresses emotions and feelings. In his rather garbled and circuitous way, Victoria expresses himself on the inherent value of the nonverbal:

Qualitative nonverbal communication utilizes feelings, emotions, attitudes in the expression of ideas, and these are significant factors in the interpersonal communication of students and teachers.⁹⁴

He agrees with Galloway that the nonverbal may be the most important factor for students (all students) in determining the meaning of teacher-generated messages.⁹⁵

Although he never quite conveys how the symbol-making process operates, Victoria sees nonverbal communication as a thoroughly symbolic one. He goes so far as to call the nonverbal an "analogic codification."⁹⁶ Thus, he indicates that the nonverbal can be codified, measured, and interpreted according to specific meanings. All in all, his thesis is an attempt to probe the importance of that presumed analogic codification by the use of scientific procedures and compilation of data.

At each level, from the pilot study to the development of the typology to the gathering of results, there is concern for the evidence of reliability and validity of the observation techniques.

In the evaluation process, a two-in-one instrument, composed of a typology of nonverbal behavior, (termed "gestural behavior categories") and a continuum of terms categorizing qualities (which are rated as "neutral," "supportive" or "unsupportive") is used. (See Appendices H, I, J.) Here, we are confronted by a "double-ness" of assumption. First, (although factor analysis is reported) certain gestures are placed in the "interactive" and "spatial" referents while others are placed in the

"image relective referents." The former are subheadings of "Transactional Nonverbal Behavior;" the latter are subheadings of "Non-Transactional Nonverbal Behaviors."⁹⁷ The question of exactly how these operate is never addressed nor is the complete lack of listing of other behaviors ever explained. Second, while supported by some research, the fact that the "terms descriptive of qualities" are divided into "supportive," "neutral" and "unsupportive," fails to take into account some important distinctions: What range of feelings possible in the classroom is missing from this "continua" of only seven vague terms? What are the correlates in terms of teaching/learning gains or losses from the use of "unsupportive" behaviors? For example, how is "inattentiveness" to negative student behaviors to be rated? Are the "unsupportives" always to be labelled as negatives in the classroom and thus squeezed from teaching dynamics altogether?

Finally, one must note that Victoria explicitly refers to the typology and the "terms descriptive of qualities" as "simultaneous" evaluative measures.⁹⁸ How this is to be achieved (certainly not on the basis of Appendices H and K) is unclear. In fact, listings done later such as those in Appendix J (essentially a repeat of page 117 of his thesis) are as accurate as

Victoria gets in regard to their use. He links them by proximity of reference but not by relationship in such quotes as the following:

...we developed a typology of gestural behaviors and terms descriptive of qualities evoked by that behavior. We found that these behaviors could be described and measured within the context of teaching-learning situations by categorizing the behaviors and the qualities evoked by them.⁹⁹

The only apparent link between the typology and the qualitative terms is that judges wrote "...terms descriptive of qualities characteristic of the behavior viewed."¹⁰⁰ Here, a circularity of reasoning is evident. One infers from a gesture its qualitative characteristic; in the guise of objectively measuring, one categorizes behaviors according to their inferentially-based qualitative terms.

Problems with the lack of specificity of the instrument and its allowance for interpretation arise in the conclusions and recommendations section where Victoria advocates, (as did Flanders, who suggested forty hours training) more than the sixteen hours training completed in this study.¹⁰¹ It is questionable as to how such intensive instrument usage training could be implemented in school systems at large or by teachers interested in the self evaluation that French recommends.¹⁰²

Difficulties owing to the lack of mutually

exclusive categories arise also:

...it is believed that further investigation of the gestural behaviors categorized as Body Motion is warranted to ascertain whether certain of these behaviors should be subsumed under the Body Posture category.¹⁰³

Regardless of these problems of conception, Victoria affords much that bears study. His "kernel" idea that specific subject areas merit study as to their possible correlation with nonverbal behavior-stimuli is a fascinating one. That one could reach validity and reliability in studies to determine the correlates on nonverbal behavior/supportive climate/teaching objectives needs some further investigation.

Too, the precise methodology employed by Victoria substantiates his claims for "some degree of content validity and reliability "¹⁰⁴ and of effective instrumentation as judged by data.¹⁰⁵ Among his methods worthy of consideration are the following: random selection of student-teacher-participants, random selection of student-teacher-participants for the pilot study, random selection of student-teacher-participants for the instrument categorization, use of trained judges experienced in art education, use of video taping techniques, use of six five-minute tapes randomly sampled from a one hundred-twenty minute class, timing

of segments by a three-minute tone device, use of contextual teaching/learning situations, teaching of comparable subjects in observed classes, evaluation completed in task, demonstration, and evaluation contexts.

Possible questions as to methodology may arise in that: at no time was the context of the verbal taken into account in the observations; study was not undertaken as to the intrusiveness of the camera; investigation as to the placement of the camera was not done; comparability as to place, environment and time of day of the observations was not offered; disadvantages of taping all segments in one block of time were not examined; ground rules as to re-playing of the video tapes and re-coding were not established; no cultural, racial or socioeconomic variables were introduced; no study of artificial system influence was mentioned.

Although Victoria proves his instrument to be valid, he may nevertheless pose more questions than he has answered. Of value to the development of teacher nonverbal behavior instrumentation are: a concern for scientific objective data, a predilection for the qualitative emotional-feeling aspects of the nonverbal, the solid base of research completed in a contextual realistic setting, a perception of the "gap" between teachers and students that may be at least partly

nonverbal in nature. That Victoria offers a procedure, albeit in need of redefining and refining, is a significant contribution, perhaps to all teachers.

LOVE AND RODERICK-1971

"DEVELOPMENT AND FIELD TESTING OF AN AWARENESS UNIT"

Love and Roderick develop an instrument to record, but not evaluate nonverbal behavior using some of the same background as Galloway and Victoria. Love and Roderick, however, alter methods and rationale greatly. They base their instrument on the Flanders verbal instrument and matrix for the end purpose of completing an awareness unit. designed to make teachers more conscious of the nonverbal cues they employ and to introduce more nonverbal behaviors into the teacher's possible repertoire. The unit was completed successfully.

Only a short article reporting the development of the instrument and the field testing of the unit is available. As a result, some of the methodology involved in the setting up of the instrument is either not included or is nonexistent.

First, nonverbal behaviors were identified that are "...exhibited by a majority of teachers regardless of grade level and subject area," and are "...singular in meaning in our culture rather than related to any

individual style or personality."¹⁰⁶ Just how these criteria are met is not known in terms of Love and Roderick's explanation. Particularly in the case of the latter criterion, substantial investigation would be necessitated to gain validity and reliability.

Further, this instrument, designed to record nonverbal behavior, also falls into a system originally designed for the evaluation of verbal behavior. Although the original Flanders categories are paralleled or eliminated or added to, nevertheless, adherence to an originally verbal framework is maintained. (See Appendices L, M.) As with other studies, the assumption is that both the verbal and the nonverbal partake of the same structure, a questionable basis for objective measurement indeed.

Unlike other studies, with the exception of Grant and Hennings and Civikly, the Love-Roderick system assigns no positive or negative attributes to any nonverbal behavior. There is, they explain, no "...inherently 'good' or 'bad' except as it relates to the goals of the individual teacher in a given situation."¹⁰⁷ In this respect, Love and Roderick escape the evaluation-without-scientific-grounding so perilous to other studies.

Morganstern, it must be noted, attaches positive and negative exemplars of each category (See Appendix N) in the Love-Roderick system, this according to the Gagne theory that positive and negative values must be assigned.¹⁰⁸ However, Love-Roderick sources cited by Morganstern included no such positive or negative exemplars.

As one peruses the Love-Roderick instrument, (See Appendices L, M) however, one notes the use of subjectives (e. g., "deviant" in category 7) and the merging of and possible misplacing of behaviors. Why, for example, is "extends arm forward" placed in category #6 and "thrusts arm forward" placed in category #8? In addition, many possible teacher nonverbal behaviors, as Love and Roderick themselves point out, are not included. The fact that no vocalic, no artifactual, no environmental, and few proxemic nonverbal cues are included seems vastly limiting to the scope of the instrument.

Few other specifications as to the application of the instrument are given, except as it was used in the single field study with University of Maryland male and female, experienced and inexperienced teachers of elementary and secondary levels. Although students were not present, except that other teachers acted as "students,"

the researchers do not preclude the use of their instrument in "live" situations. When tallying nonverbal behaviors, on the basis of slides and video tapes, time slots of unspecified lengths are used; while tallying in "live" or practise situations, natural behavioral events, comparable to those of Galloway are employed.

This system is an event one. Each time a nonverbal behavior occurs, it is tallied once, regardless of the length of time it takes to complete. When the observation is complete, there is a record of the pattern of teacher nonverbal behavior, but not the sequence of that behavior.¹⁰⁹

As to training of observers, the choice of subjects, the standardization of time, place, content taught, the introduction of carefully controlled cultural, racial or socio-economic variables, the context of the verbal system¹¹⁰ or any other scientific or quasi-scientific procedures, the development of the Love-Roderick instrument is lacking.

In doing their succinct study and developing their simplistic categories, Love and Roderick have no doubt developed an informal means of heightening the nonverbal awareness of teachers. It should, however, be used with the caution that it was never intended as an evaluative instrument. As such, it lacks the scientific data, the coherence of a thoroughgoing methodology and

the exact observation necessary to evaluative measures.

CHEFFERS-1973

"AN INSTRUMENT DESIGNED TO EXPAND THE FLANDERS SYSTEM OF INTERACTION ANALYSIS" - (CAFIAS)

Drawing on a wide range of educational publications and journals and on several simplifications of statistical methods books, Cheffers founds his system completely on prevalent educational methodology and theory, taking little of recent communications experimentation into account. Visiting Withall, Amidon, Flanders, Galloway, Bruner and Mosston in his literature search, he bypasses Mehrabian, Birdwhistell, E. T. Hall, Schefflen, Knapp, Ekman, and Sommer. Thus, largely bound by educational assumptions, he develops CAFIAS, Cheffers Adaptation of the Flanders Analysis System. (See Appendices O, P.) CAFIAS is an apt title, indeed, for it drops onto the verbal FIAS (Flanders Interaction Analysis System) a "nonverbal" application. CAFIAS is measured against the FIAS. The primary statistical method employed is a comparison of validity and reliability of the two instruments.¹¹¹ Both use the three-second time sequence for at least twenty consecutive minutes (for four hundred tallies) of a class and so resultant matrices from FIAS and CAFIAS are presumably comparable.¹¹² Such an extension of the verbal scale and the accompanying

assumption that the nonverbal system operates in largely similar ways to the verbal brings the advantage of simplicity and with it evident problems.

In fact, Cheffers widens the philosophical field beyond any used so far. No longer is the subject observed simply the teacher, the subject is now a three-role "diversification of teaching agency." (See Appendix Q.) Included are the class teacher (coded "."), (See Appendix O.) the other students (coded "S"), and the environment (coded "E").¹¹³ Cheffers explains:

A philosophic change in the nature of precisely who is doing the teaching represented a major departure from the Flanders philosophy. The writer hypothesized that the sum total of all experiences which brought (sic, brings) about a relatively permanent change in a learner, overt or not, constituted (sic, constitutes) the teacher. If learning had occurred, (sic, occurs) then teaching had taken (sic, takes) place.¹¹⁴

Notable here is the fact that of the five major instruments studied in this chapter, Cheffers is the sole one either to take other students into account or to define "learning." His philosophy is not borne out by his methodology, for he never studies his tripartite "agency" from the point of view of one single student. Nor does he institute a procedure in which "learning" gains, at least by students, are measured. Again, in Cheffers' system, "learning" is not in any way correlated with the

instrument's categories.

At the same time, the CAFIAS accomplishes a range of dynamics untouched by the FIAS categories. First, Cheffers omits, without comment, the "direct" and "indirect" influence categories present in FIAS along with their positive/negative implications. The assumption is not made that all "criticism" is harsh and negative; Cheffers allows for same in category "seven," indicating "hard" criticism and the "seven-two," indicating "soft" criticism.¹¹⁵ Though the distinction is subjective, at least the dynamic is included.

Second, the scale is designed to include nonverbals, coded adjacent to verbals in their "teen" equivalents. Note that congruent nonverbals to verbal "two" (See Appendix O.) are coded as "twelve." Although this forces an equalizing of the verbal and nonverbal, it does allow for simple codification of both systems simultaneously. Further, as Cheffers points out, the scale could be extended, after proper study and experimentation, to the prefixes "two," "three," etc. In his verbal-alongside-nonverbal coding, Cheffers does not instruct for easy determination of incongruencies, double-binds, redundancy and so on. This researcher believes that such coding could be accomplished using a more refined and delicate "offshoot" of Cheffers' measuring instrument.

Too, in the nonverbal coding, Cheffers has distinguished between "facial" and "postural" systems, one of the few instruments to do so. "Bleeding" into these systems, however, is the vocalic in categories "12," "13," "15," "17," "18," and "19" and the proxemic in "12," "13," "14," and "19."

Cheffers' instrument also incorporates student response in his new "eine" and "eineteen" categories (See Appendix O.) as well as student initiative in his "nine" and "nineteen" categories.¹¹⁶ Likewise, CAFIAS coding may be done in diversified class structures, unlike the FIAS (and others) which is used only in whole class instruction. For this, Cheffers adds the coding of "W," indicating whole class; "P," indicating part class or small group instruction; and "I," indicating "not influencing" instruction. (i. e., the teacher works apart from students, etc.)¹¹⁷

Cheffers employs a sixty-by-sixty matrix as opposed to the ten-by-ten matrix of FIAS, making it possible to include all FIAS ratios and to add the following:

1. Percentage verbal-nonverbal interaction.
2. Percentage of class structure.
Time spent as a whole (sic, ,)
in parts and/or without
teacher influence.

3. ...percentage of teacher agency variety and similarly (sic, similarity) to the verbal matrix. Percentages of student teaching, environmental teaching and teaching by the classroom teacher... 118

Missing altogether from Cheffers is provision for cultural, racial, socio-economic variables or provision for bodily and artifactual systems. Regardless of inclusion, problems remain in his treatment of the verbal, vocalic, facial, kinesic, proxemic, and environmental systems.

When one considers the provisions of his instrument, one notes an odd "roundup" of kinesic, proxemic and vocalic cues in each category. There seems to be, for example, in category sixteen no distinction made between:

Face:	Points with head, beckons with head, yells at
Posture:	Points finger, blows whistle, holds body erect while barking commands, push (sic, pushes) a child through a movement, push (sic, pushes) a child in a given direction. 119

What the differences are among any of the above cues is unclear. Why are "beckon[ing] with the head" and "yell[ing] at" joined in this category? Why could they not be at opposite ends of the spectrum just as easily?

Fascinating additions to methodology include: fourteen-week observer-training sessions,¹²⁰ use of

"expert" teachers for teaching observer-training sessions,¹²¹ two experimental groups,¹²² team coding and single coding,¹²³ dual camera use-one focussed on teacher-subject, one on student-subjects, split screening with simultaneous timing of teacher video-tape and student video-tape,¹²⁴ results from six separate codings conducted on the same tape, a Physical Activity Questionnaire (PAQ) which distinguishes between the FIAS and CAFIAS,¹²⁵ "blind" interpretations made solely on information received from either the FIAS or CAFIAS matrix, and control group interpretations from actual viewing circumstances.¹²⁶ The final three procedures allowed for a "testing" of the FIAS and CAFIAS by means of administering the PAQ to the two "blind" interpreter experimental groups and to the control group. CAFIAS interpreters scored higher than FIAS interpreters.¹²⁷

Problems arise in the methodology in regard to camera position and coder recording instructions, and their nonadherence to Cheffers' philosophic diagram reproduced in Appendix Q. Although the classes taped were physical activity classes, Cheffers makes no mention of the camera's mobility nor of the dynamics of "panning," "zooming," and so on. It cannot be determined from the information given the degree to which the camera intrudes into experimental objectivity here. The split screening technique may have allowed for the indexing of a congruency

category, but none is supplied by the instruments. Split screening techniques were not validated; it is not certain whether one or the other side of the screen dominated coder attention during any or all of the tallying.

Although objectivity is supposedly provided for by Dr. Amidon and the investigator, who each acted as "expert" teachers to the training-observers, nevertheless one questions whether having the same person construct the instrument, teach both its use as well as the use of the instrument against which it is to be compared constitutes "blind" experimentation.

Finally, this researcher questions whether the higher scoring of the "blind" coders using one instrument against those using another instrument is a test of either instrument's capacity to interpret behavior, verbal or nonverbal. Could those scores not indicate the intelligence, clairvoyance, or adaptation of related knowledge on the part of the observers and questionnaire respondents? Could the scores indicate the SUPERIOR LACK of accuracy of the CAFIAS?

Cheffers has, however, provided a system using new techniques. It is an advancement in that sense alone. It is, more than that, a feasible and efficient instrument for coder use. The multiple coding system used by Cheffers to hold the verbal and nonverbal in combination

could perhaps be refined and extended to other systems. With more experimentation in the communications field and with greater development of technical resources, full implementation of multiple coding may become available.

CIVIKLY-1973

"TEACHER NONVERBAL COMMUNICATION CODING SYSTEM" (TNVCC)

With a firm background in communications and nonverbal research techniques, Civikly embarked on a two-stage research project in teacher nonverbal behavior. One, experimental in design, employed three separate thirty-minute video-tapes of a trained teacher-actor delivering identical lectures from the a.) stationary, b.) physically active, and c.) incongruent (i. e., verbal and nonverbal channels were contradictory) conditions. Lectures dealt with Kuhnian theory. A twenty item multiple choice post test following the lecture measured cognitive achievement and a subjective test indicated affective responses. Primary hypotheses were not supported in this stage of research.

Unrelated to the above is the second stage, descriptive in approach. Since this stage develops and validates a coding system for teacher nonverbal communication, The Teacher Nonverbal Communication Coding System

(TNVCC), it is the focus here. Like Love-Roderick, Civikly makes no assumption that nonverbal behaviors are either positive or negative. Behaviors are simply listed beside a matrix for coding. (See Appendices R-I and R-II.) Since behaviors are linked to nothing but an overall heading, one makes no conclusion about the effect of teacher nonverbal communication provided on the basis of the form. The matrix does, however, provide ratios for: frequency of one nonverbal behavior to another, frequency of one subheading of nonverbal behavior to another, frequency of personal acts to instrumental acts, and unspecified acts to specified acts. Civikly does not investigate these ratios.¹²⁸

As Civikly mentions, there is no provision for the dimensions of eye contact, proxemics, or touch.¹²⁹ Further, verbal, artifactual and environmental influences and cultural, racial, or socio-economic contexts do not appear. However, the "others" category does provide for "write-ins" of any unlisted teacher behaviors. (See Appendix R-I.)

As in some of the earlier studies, the use of "natural behavior segments" evokes questions regarding coder objectivity. Civikly does add some useful methodology, however. A sequential record is constructed in the process of coding. Coders number the first

behavior as "1" in the appropriate block (instead of checking the block), "2" for the second behavior and so on. Simultaneous acts are "repeats" of the number, as in:

walks across room	2
waves arm	2
shrugs shoulders	2

or closely-occurring behaviors are coded by like prefixes and sequential suffixes as in:

walks across room	2-1
waves arms	2-2
shrugs shoulders	2-3

An extended behavior is coded by an encircled number as in:

paces	③ ¹³⁰
-------	------------------

Such systematization provides for examination of behavior sequences, behavior clusters, and long-term behaviors. Along with the ratios mentioned previously, these could provide a teacher with some idea of how predominant specific behaviors are, how lacking others are, and how patterned still others are. This could be accomplished, of course, without evaluative labelling.

Other than the above, there is little new or exciting in the TNVCC. Four trained observers, working in teams of two, coded four five-minute long video-tapes of four college lectures using Civikly's instrument. Details of training, coding, lecture conditons and coding

conditions are barely discussed in her thesis.

After coding is completed, however, Civikly adds a new step. Coders, upon completing the matrix, answer the "Semantic Differential." (See Appendix 5.) Civikly reports that not only is the coding system valid, but also that the completed matrices and semantic differential are "consistent."¹³¹

In this, Civikly supplies another approach to teacher nonverbal communication. It is one that is no doubt more compatible with the work of Birdwhistell and Hall than the earlier studies. The TNVCC specifies behaviors and reveals a great deal about the frequency, clustering, duration, and relative placement of these behaviors in the lesson. With refinement, such an instrument might include a greater range of behaviors and systems. With continued research, it may be possible to let these behaviors be evaluative in nature. When and if research determines more about verbal/nonverbal interactivity and student/teacher dynamics, an expanded TNVCC may be capable of considering such influences also.¹³²

Of the five instruments covered in this chapter, the TNVCC is perhaps the most scientifically objective one. It is, at the same time, the least evaluative one.

In use, it must be borne in mind that none of these

five instruments is intended by its constructor to be an "end-all" in the study of teacher nonverbal communications. Each was designed as a step in a struggle toward an essential end. And that end has more to do with the heightening of human awareness than any mere compilation of categories or completing of matrices could ever suggest.

CHAPTER III

MINOR INSTRUMENTS

In addition to the measuring techniques covered in Chapter II, there are a number of smaller studies that are scantily reported, sometimes without the inclusion of evaluative instruments. In some cases, these deal with "fuzzed-together" verbal/nonverbal behaviors, as in Medley and Mitzel. In others they involve non-verbal behavior alone, such as with Grant and Hennings. Most do add a new perspective, an interesting innovation in methodology or another facet in instrumentation. Most do not provide sufficient information to merit an extensive critique, however. Researchers may find in them serendipitous clues.

MEDLEY AND MITZEL-1958

"OBSERVATION AND SCHEDULE RECORD" (OSCAR)

In an attempt to reach unbiased, objective and interpretable results, Medley and Mitzel devise OSCAR, a verbal/nonverbal evaluative scale. The experimenters show the fallacy of early scales and contend that the evaluative rater actually intervenes with his own subjectivity

between the teacher's behavior and the teacher's "score." Subjectivity, they go on, is a condition produced by instrumentation.¹³³

In order to prevent such an intervention, Medley and Mitzel set up an evaluative technique composed of two parts. The first part involves an observer who lists teacher and pupil cues. Forty-four "activity" behaviors such as "teacher laughs" or "teacher works with individual pupil" are included. A similar procedure is followed for "materials" behaviors and "subject" behaviors. The second part involves the clerical task of assigning weights to the already-recorded teacher and pupil behaviors. The latter must be completed by someone other than the initial observer.¹³⁴ Separation of the two procedures gives reliability.

Medley and Mitzel find the advantages in a bi-fold technique to be: the shorter time needed for observer-training, increased capacity and variety for instrument categories, greater statistical reliability between initial observers who record at separate class sessions.¹³⁵

Although OScAR is used to measure verbal content and social structure, it may also be used to measure "socio-emotional climate," according to Galloway.¹³⁶ Items in OScAR's "Signs Section" do tend to indicate

classroom climate. Categories indicating "pupil moves freely" or "teacher shows affection for pupil"¹³⁷ are socially-oriented ones. Such ratings as "manifest teacher hostility" do incorporate nonverbal responses.

Despite the subjective ratings above, Medley and Mitzel have provided a crucial step toward scientific objectivity in evaluating teacher nonverbal behavior. The unique two-phase-listing-and-weight-assigning observational procedure that they advocated in OSCAR is yet to be developed.

PERKINS-1964

"A PROCEDURE FOR ASSESSING THE CLASSROOM BEHAVIOR OF STUDENTS AND TEACHERS"

Perkins adds several innovations to classroom behavior assessment that better teacher and student observation. (See Appendix T.) Again, his procedure covers both verbal and nonverbal behavior. Fifteen student behaviors and seventeen teacher behaviors make up categories for observation. The similarities of teacher categories one through ten to the Flanders system are obvious. (Compare Appendices T and B.) It is true that more behaviors are incorporated by Perkins' instrument than by those of Flanders or Love-Roderick, yet here the nonverbal and verbal merge into one indistinguishable blend.

Two significant developments in methodology are notable, however. First, use of television cameras mounted in the classroom wall and operated by remote control eliminate the need for both observer presence and "fixed" camera stations. Second, a Bales-Gerbrands recorder, "...an electrically powered machine that moves tape (paper on which categorizations are recorded) at a constant speed " enables the "...duration of each behavioral response to be accurately measured."¹³⁸ Simultaneous recording of teacher and student categories by this means permits "pattern and sequence analysis."¹³⁹

Using this methodology in his study, Perkins shows differences between achiever and underachiever social contacts and involvement in learning activity.¹⁴⁰ Here, he makes an attempt at an application to measurable "learning" and "interpersonal gains."

Some further research employing more strict definitions of "verbal," "nonverbal," and "behavior" might be accomplished using a dual measuring technique, remote control television cameras, a timed-tape instrument or a "learning" variable.

SCHUSLER-1971

"TEACHER AND PUPIL COMMUNICATION, NONVERBAL" (TAPCO-N)

The Teacher and Pupil Communication, Nonverbal

examines generalized feeling of a pupil toward his teacher and that teacher's estimates of his pupils' (i. e., teacher-directed) feelings. Pupils indicated responses to nonverbally presented "stick figure teachers" on a chart of adjectival dichotomies (e. g., "friendly" or "unfriendly") and teachers projected their pupils' responses in turn.¹⁴¹ A perception discrepancy scale (PDS) emerged from the comparison of the two scores. The Edwards Personal Preference Schedule (taken by teachers) scores were correlated with PDS with varying results.

Despite methodological problems, such as the "either-or" set up of the adjectival dichotomies chart, there are major contributions here. Schusler considers the range of interpersonal needs and priorities; he takes into account a "Laing-ian-like" perspectives issue; he confronts the problem of relationship-building in the classroom. Schusler's is a modest beginning to measuring actual classroom experience.

KOCH-1971

"NONVERBAL OBSERVABLES"

Koch, acting as consultant in systems' analysis, contends that observing nonverbal communication in classrooms contributes to assessment of a school's social system. Raw data regarding teacher behavior is gathered by an informal observer having no technical equipment. Although

interesting in anecdote, Koch's system (See Appendix U.) can hardly be termed objective. Note the use of evaluative phrases in the instrument such as "aloof, bored, disinterest" in the "Molar Impression" category. Such an entry calls for subjective judgment on the observer's part.

Informal and easily completed, this instrument would perhaps be of limited use to the expert in nonverbal communications who is fully aware of the complexity of classroom behavior. On the other hand, its lack of validation and its oversimplification are too symptomatic of the subjective and inaccurate tendencies so prevalent in teacher evaluation. Dangerous in the tenure/jobs market arena, such an instrument could too easily be employed to Machiavellian ends.

On the other hand, Koch's consideration of student-initiated activity, student in-put, and the like are unusual in that they make possible inferences as to student self-actualization in the classroom.

GRANT AND HENNINGS-1971

"CATEGORIES OF INSTRUCTIONAL MOTIONS"

In their renowned book, The Teacher Moves, Grant and Hennings provide a bare three categories of instruction for use in teacher nonverbal measurement. (See Appendix

V.) "Conducting," "acting," and "wielding" are defined and subdivided, but never associated with evaluative criteria nor with a methodological system.

Rather than a feasible category system, Grant and Hennings provide a philosophical approach. Every teacher, they contend, has his/her own unique nonverbal style; it is neither positive nor negative in itself. Each teacher can likewise learn to self-evaluate, add to his/her nonverbal repertoire, and produce "...sequences of motions that add to rather than detract from his verbal teaching."¹⁴²

With this as philosophy, it is not surprising that Grant and Hennings posit that nonverbal behavior can be evaluated solely within the frame of its context. At the same time, they give the field no means, except by vague allusions to the difficulty of contextual research,¹⁴³ of accomplishing measurement within contextual settings.

PARKER AND FRENCH-1971

"THE STUDENT BEHAVIOR INDEX" (SBI)

After considering the development of instruments for measuring teacher behavior, Parker and French assume a new stance, seeing a need now to study student verbal and nonverbal behavior.¹⁴⁴ (See Appendix W.) Although obviously based on the Flanders scale (Compare Appendices W and B.) and partaking of its misperceptions and miscon-

ceptions (as discussed in Chapter II,) it is nevertheless a development that bears mention. Again the student is incorporated, as with Perkins, into the dynamics of classroom behavior. Again pattern analysis and sequence analysis are possible using the SBI.

Moreover, because of its similarities to Flanders Interaction Analysis and French and Galloway's IDER*, the Student Behavior Index can be employed in multi-dimensional classroom analysis. All three approaches use ten categories; all use ten-by-ten matrices; all use similar time lapse techniques; all use similar methodological set-ups.

A possible development of student and teacher nonverbal categories added to the FIAS, IDER, and SBI, perhaps similar to that of Cheffers, may be feasible at this time. For those already committed to Flanders, multi-dimensional analysis may fill a gap.

French and Parker emphasize the importance of "self-directive" behaviors and the need to develop students' self-generating behaviors saying:

We have made some frightening assumptions about student behavior. We consider a student well-behaved if he is quiet. Silence becomes the first distinguishing mark of a successful pupil.¹⁴⁵

* French and Galloway's expansion of the Flanders system.

Here, category "two" ("Self-Initiated Nonverbal Behavior") brings to bear the issue of student self-actualization upon classroom behavior.

Although limited in scope, the innovations and perspectives offered by these researchers, when added to those of Chapter II, offer a scattered-paradigmatic view of the field. No one standard dominates. The "crisis" necessary for an emergent scientific revolution prevails.¹⁴⁶

CHAPTER IV

PROBLEMS IN CURRENT STUDIES

Problems encountered with measures of teacher nonverbal behavior obviously run throughout the scanty number of studies available. As expressed previously, such difficulties take many forms and appear in recurring instances. No doubt they are manifestations of difficulty accompanying any field's beginning research. There may also be a conflict of paradigms prior to an advanced consensus of hypotheses and agreement as to proper methodological procedures.

At the same time, much remains that needs pursuit both in depth and in breadth in the study of teacher nonverbal communications. In this chapter, a review will be made of those problems symptomatic of the quasi-nonverbal and wholly nonverbal measures and evaluative procedures. The review will include the difficulties of theoretical conception, definition of terms, instrumentation, methodological procedures, and applicability of outcomes.

NOTES ON PRESENT USE OF NONVERBAL MEASURES

At the present time, there is no reason to think that evaluative measures of teacher nonverbal behavior are used in significant instances. Although reports indicate the Verbal Interaction Analysis is used both at the university level and at the school district level,¹⁴⁷ there are no wide reports of the same for Nonverbal Interaction Analysis. Rather, there is some advocacy for the use of nonverbal evaluative measures at this time and insistence upon the importance of the nonverbal in the classroom by those such as Galloway, Victoria, and Cheffers.¹⁴⁸

Part of this may be due to the lack of service given by the communications field to the field of education. Perhaps there is consequent oversimplification of and misconception about nonverbal phenomena and how they operate. Civikly, with Medley and Mitzel, rise from the communications field to meet relevant problems in education. Most of the other researchers are educators investigating nonverbal communications for clues capable of solving classroom problems.

Other than those recent graduates and teachers presently training or updating skills in "enlightened" departments of education, there are few teachers who

have studied the field beyond a cursory glance at Julius Fast and the "glosses" available in current periodicals of education.

For teachers who seek training, there is little available. Few education-communication courses are presently offered. The literature available is at best difficult-to-compile, ill-defined, and contradictory. Often it is so technical as to be unmanageable for the classroom teacher untutored in statistics and experimental procedures. Teachers who make the effort may find that they are bogged down in the "bits and pieces" of laboratory research not useful to them in their rich, complicated and demanding world of human interaction.

If one puts himself/herself in the "shoes" of the teacher, who is pressured from all sides, who must meet conflicting demands, who is expected to get "results," and who is so often on the defensive, one may readily recognize that the teacher is not likely to "play scholar" in the communications field.

Yet the "translator" of scholarly material regarding nonverbal phenomena hardly appears to address the teacher's needs; when he does, the material is so brief and unspecific that it provides somewhat superficial and non-informative material.

And the teacher and the student in their human dynamics interact in a society that itself is impoverished:

In modern urban society, unfortunately, people have allowed the foundations for their extraverbal systems to become unused and dulled, but it is possible for them to regain the use of their senses and to enter into a richer interaction with the environment and with other human beings. One price mankind may pay for his technologies is the dulling of sensual abilities, including kinesic, tactile, and proxemic capacities. Because we don't perceive well, we shut ourselves off from our environment, from other creatures and ultimately from other human beings. But there are already signs of modern man's unwillingness to live partially aware of the signals that other creatures send out, in a world where sensual awareness is dulled and stunted.¹⁴⁹

PROBLEMS IN INSTRUMENTATION

Arising from the analyses in Chapters Two and Three of this thesis are several fairly characteristic problems of instrumentation. The fact that many of the nonverbal measures are based on earlier categories forces them into nonverbal assumptions. Further, many of the instruments, even the multi-dimensional ones, assume that the verbal and nonverbal are equally-weighted across all categories. Comparison with communications research calls such equality into question.

Definition of terms constitutes a major stumbling block, also. Some writers such as Galloway and Cheffers define behaviors in such a way as to make them overlapping. Others, such as Victoria, define categories in such complex terms as to make them somewhat unintelligible.

Moreover, behaviors are in some instances listed in subjective terms. The presumably objective method is thereby undercut. Evaluative rating of "direct" or "indirect influence" or of "positive" or "negative" behaviors is, as discussed earlier, not wholly supported by valid and reliable data.

Even continuum ratings, as in Galloway and Civikly, are based on highly subjective terms. Although more variation of attitudes toward behaviors can presumably be reflected, there is still the question of whether judges (or students) accurately deal with gradations of dichotomies. In fact, when measuring by continuum, one may well be reflecting individual perception rather than the "observed" behavior.

Several of the multi-dimensional measures show deference to the verbal system. Among them are Cheffers' CAFIAS, Galloway's adaptation of his system of Flanders, Medley and Mitzel's OScAR, and Perkins' instrument. Victoria, Civikly, and Love-Roderick refer to the importance of verbal interaction but do not attempt to

include it in their measures.

These instruments are intended by their makers to structure limited assessments of classroom behavior. When used properly, they may provide indications of teacher nonverbal behavior. But gross categories in them are not capable of accurately representing the richness and complexity of nonverbal experience.

Rarely do the writers provide succinct understandable "directions-for-use." Should well-meaning school officials or administrators "stumble" upon such instruments and use them improperly, teachers could be alienated from their use.

Beyond all this is the issue of the various measures' appropriateness to the following uses:

teacher self-evaluation
 student and teacher mutual evaluation
 administrative evaluation of teachers
 study materials for use in teacher training
 and/or education courses
 current research being completed in the
 laboratory and in the field

It would seem obvious that few, if any, of the evaluative measures could simultaneously meet all these demands.

Student and teacher mutual evaluation would require practicality and easy understandability such as Perkins' instrument provides, while current research would require measuring capacities for complex behaviors such as Hall's notation system might offer.

PROBLEMS IN METHODOLOGY

The methodology employed in these studies raises an equally perplexing problem. Should a macroscopic evaluation which would give some imprecise indication of teacher behavior and its possible effect on students be done? The derivatives of the Flanders scale do give such a global view with inherent ease of measurement, but they end with murky non-specific results.¹⁵⁰ Or should microscopic evaluation which would give particular data as to teacher-student interaction be initiated? This "brand" of measure, as Civikly's tends to do, gives specific, sharp results that are somewhat difficult to generalize.

With a qualitative measure such as Galloway's, we are left with no quantitative proof and few provisions for "blind" experimentation. When strictly quantitative judging is done, as with Civikly, we are left with no decision as to qualitative effects.

Central to methodological problems is the omission

of the student from most measures either in categorization or in feedback. The Perkins and Parker-French instruments provide for student incorporation into the communication model and run counter to the early trend.

Since teacher behaviors are measured by many of the instruments as isolated phenomena, most behaviors, whether coded by a time slot of three or five seconds, or by a "natural segment," are measured in exclusion of other surrounding behaviors. The tendency to omit study of "cluster" or "sequence" behaviors could lead to an oversimple cause-effect explanation of complex behaviors.¹⁵¹ Another major reduction of instrument capability occurs in that few are able to deal with incongruent simultaneous behaviors and/or words, and that few are even capable of measuring redundant behaviors and/or words. None has been used to these ends.

Neither is the variability of context taken into account in many of the methods used in these studies. Little is provided in regard to age, sex, race, culture, and socio-economic contexts against which these measures are made. In some cases, the actual environment of class size, lighting, window size and placement, decoration, and furniture arrangement, all so inherent to the nonverbal, is not even taken into consideration. Classroom contexts are not held constant by methodological stipulations; yet

they are not considered variables in the experiment either. In addition, no provision is made for intentionality as a contextual influence in any of the studies examined herein.

Most experiments make use of limited subjects, limited samples, and few studies of reliability and validity. Parts of the instruments, training of judges, judges' coding, etc. are not always tested for reliability and validity.

With such problems as above prevalent in the conception, construction and methodological procedures of teacher nonverbal measures, it must be admitted that this still-young field is struggling. The enormous potential of the nonverbal in the classroom, tapped only at scattered sources, may be fully discovered by a future instrument.

GENERAL RECOMMENDATIONS

Much in the way of general changes and additions needs to be suggested at this time. At the university level, inclusion of nonverbal theory courses in the education curricula, of communications courses for teachers, or even of general communications courses may stimulate greater awareness. Also, the institution of awareness-raising in-service programs at local and university levels may help develop a greater tendency toward

nonverbal self-evaluation. Television courses, videotape units and cassette lessons might be helpful in accomplishing the same. Also feasible are the introduction of video nonverbal self-analysis techniques and appropriate measures that could be employed with a "buddy" system format. Using cassettes and the same approach, a team could provide feedback as to vocalic phenomena.

More than that, the professions associated with creating certain aspects of the nonverbal environmental world need to be made aware that they are doing so. City planners, architects and school boards engaged in setting up schools and their environs should be made aware of the components of space, color, light, texture, material, and so on as they affect communicative potential. Some investigation as to furniture, accessories, clothing, cosmetics and hair style as related to nonverbal dynamics should be instituted.

Finally, some incorporation right into the classroom of communications units could be made exciting and viable in both the secondary and elementary schools. Strother and French both advocate such units and this author herself considers units taught at the high school level quite provocative and successful.¹⁵²

In addition, some investigation as to the development of teachers' models may be undertaken. It is possible that sample video-tapes could be made which demonstrate and provide commentary on interacting in:

nonverbally "noisy" environments
 meager feedback situations¹⁵³
 double bind circumstances
 redundancy circumstances
 spiralling reciprocal events
 meta-communicative events

The emphasis in such a "model" would have to be toward the recognition of and the dealing with such situations rather than on rote, pre-packaged behaviors.

Known techniques of manipulating the environment for positive interactive influence should be collected. This could cover the effects of seating arrangements, pictorial influence, light and color influence and so on.¹⁵⁴

In order to deliver such materials to the working teacher, a vehicle such as a pamphlet series, a tape-slide unit or units, video-tape unit or units or programmed packets is needed. In addition to the above, a work designed specifically for teachers could overview the consensus of studies conducted in the nonverbal field to date. Most of all, such a work might concentrate

on introducing useful easy-to-remember guidelines for nonverbal interaction such as:

1. The most accurate communication occurs when verbal and nonverbal symbols are consistent.
2. The visual communication system conveys substantially more affective information but less overall information-less factual information, and less information about personal traits other than emotional or interpersonal ones-than verbal or vocal communication.
3. When different communication systems interact in the congruent state, nonverbal communication systems represent the dominant source of meaning.
4. The facial-vocal combination of conveying emotional messages is more accurate than the vocal, gestural or gestural-vocal modes.
5. The nonverbal systems of communication seem to be far more effective than the verbal in building empathy, respect, and a sense that the communicator is genuine.
6. When communication cues are transmitted simultaneously, the different channels acting together have a compensatory and additive effect.¹⁵⁵

CHAPTER V

FUTURE STUDIES IN CLASSROOM NONVERBAL COMMUNICATION

On the basis of the preceding analysis and evaluation, and congruent with the general recommendations set forth in Chapter Four, specific recommendations may be made as to:

Instrumentation

Methodology

Future Research

Although certain of the recommendations may not be feasible at the present time for lack of financial resources, most of the research tools and methods cited herein are currently available. All in all, these recommendations are made with the following assumption:

...researchers are seeking communication rules concerning types and contexts of communication behavior. They are less concerned with the meaning attached to a particular behavior by a judge or a group of judges.¹⁵⁶

RECOMMENDATIONS FOR INSTRUMENTATION

Limited recommendations for the creation of an improved instrument for classroom nonverbal evaluation

may be posited tentatively at this time. The following recommendations are made with insistence that careful step-by-step tests of validity and reliability be established.

What is conceived of by this researcher and what has been suggested by Cheffers and been initiated by Perkins and Parker-French is the construction of a multi-dimensional instrument. This would be composed of several smaller instruments, each of them capable of measuring a component in the classroom communication process. "Sub-instruments" measuring individual student nonverbal and verbal behavior, teacher verbal and nonverbal behavior, environment, school context and community environment would be included.¹⁵⁷

Investigation as to the feasibility of studying the vocalic, proxemic, kinesic, artifactual and environmental systems in separate categories or even separate "sub-instruments" needs to be made. Overlapping of and duplication of these systems among categories as done in CAFIAS or in Love-Roderick's instrument are not recommended. Thus, if it proved feasible to create "sub-instruments" for each system, as many as twelve "sub-instruments" would make up the "master" instrument.*

Modalities in each would provide for contextual study. For example, questions about a student's age, *Twelve possibilities are mentioned in this paragraph and in the paragraph above.

race, sex, prior schooling, cultural and socio-economic background would be posed. Similar questions would be relevant to the other "sub-instruments" in order to achieve thoroughly contextual study. Incorporation of subject/participant observation should be made to provide for intentionality/inference/perception input. Extensive study of the weighting and interactive dimensions of each of these instruments would need to be accomplished. Validity and reliability figures for mathematical ratios to be used in the assignment of weights would be required.

The setting up of "sub-instruments" in itself would prove advantageous. By the means of the multi-dimensional and parallel "sub-instruments," analyses, with established ratios, of incongruent, double-bind, and redundant "messages" could be made. Individual "sub-instrument" use, combination of "sub-instrument" use, and "master" instrument use would allow for hand categorizing and recording (by informal means) in financially limited situations. Teachers and/or students could "buddy" to accomplish categorization and "hand-toting." A particular teacher and individual student might use the system for informal mutual feedback. Informal use could be made of the "master" instrument or the "sub-instruments" in communications units or courses, particularly at the secondary school

and college levels.

In-service sessions of a half-day or a day's length could employ a "sub-instrument." If a series of meetings were scheduled, individual meetings could be devoted to the mastery of each "sub-instrument's" uses, finally culminating in the employment of and interpretation by the "master" instrument. Such a procedure would allow for a close look at each of the communications systems operating in the classroom as well as an overview of the broader communication process.

At the same time, study of a department's, school's, or possibly even district's communication process might be undertaken. "Spot" problems in communications could be evaluated, as long as completed in view of contextual qualifications. Advocacy of behavior alterations are envisioned as being from fully participatory sources. For example, in the aftermath of a school's riot, evaluation should be undertaken with all parties participating (i. e., school board, superintendent, administration, teacher and student). Otherwise, an outside impartial investigative or consulting team is advisable.

Feasibility as to the writing of a computer program for use in widespread studies should be undertaken in association with the above.

RECOMMENDATIONS FOR METHODOLOGICAL PROCEDURES

In addition to the former allusions to methodological procedures, the following need to be considered during the course of instrument-development.

"Blind" experimentation should be carried on.

Validation studies must be conducted on all segments of instrumentation by application of criteria of already known reliability and validity.

Further determination of validity of those segments should be made by applying those segments to various samples of students, teachers, schools, districts, etc.

Possible objectives for classroom interaction including learning of factual information, interpretative skills, subjective evaluation and interpersonal skills should be entered at some point as variables in experimentation.

Definition of units of measurement should be made, with the theoretical background of processive, sequential, and cluster acts incorporated in that definition.

Validation of questionnaires, continua, etc. of inference and intentionality should be accomplished. Use of attitudinal continua

may be considered here.

Questionnaires regarding age, sex, race, cultural, and socioeconomic backgrounds of participants should be carefully constructed.

In experimental procedures, constancy of setting should be used as a control, except when defined as a variable.

Multi-observer coding should be used to guard against individual bias.

Multi-occasion and random-occasion coding should be employed to guard against intrusion by factors of fatigue, hunger, etc.

Two stage coding is recommended:

- a) Factual observation at tallying level should be accomplished.
- b) Later inference at the evaluation level should be done (as valid and reliable experimentation indicates).¹⁵⁸ The inferential or "...connotative approach to nonverbal communications should be grounded in the empirical finding that there are certain dominant 'dimensions' of meaning which best describe a behavior."¹⁵⁹

Use of multi-observational taping on simultaneous "bands" is recommended. Verbal, vocalic, kinesic, etc. would be held in separate "bands" of a comparative tape. (See Appendix X.)

Validation of judges' training techniques should be made. Drawing up a judges' training packet for use in informal settings might prove helpful.

Studying the degree of accuracy available in judges' ratings is advisable.¹⁶⁰

Testing informal "global" analysis techniques against the instrument should be done. (See Appendix Y for a sample of Knapp's global technique.) Side-by-side use of this technique with the master instrument may prove useful in some situations.

Study of objective and non-intrusive video-taping techniques should be made. Possible are:

- a) Hidden "porthole" cameras. (That subjects have knowledge of but no advance warning of monitoring times. This is done on the basis of research indicating that "forgetting" is a factor that normalizes subject behavior.)